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Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: Thu Nov 01 11:07:59 EDT 2007

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Application No: 10501053 Version No: 2.0

Input Set:

Output Set:

Started: 2007-10-15 15:52:12.184
Finished: 2007-10-15 15:52:13.197
Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 13 ms
Total Warnings: 6
Total Errors: 7
No. of SeqIDs Defined: 18
Actual SeqID Count: 18

Error code	Error Description
E 201	Mandatory field data missing in <223> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (8)

SEQUENCE LISTING

<110> YU, Long

<120> HUMAN HEPATOMA-DERIVED GROWTH FACTOR 5, ITS ENCODING SEQUENCE, METHOD FOR PRODUCING IT AND THE USES THEREOF

<130> 017216

<140> 10501053

<141> 2004-07-09

<150> CN02110535.9

<151> 2002-01-11

<150> PCT/CN03/00003

<151> 2003-01-02

<160> 18

<170> PatentIn version 3.1

<210> 1

<211> 990

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (5)..(910)

<223>

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ttt gcc aaa tta aag ggc tat gcc cat tgg cca gcg agg att gaa cat	97
Phe Ala Lys Leu Lys Gly Tyr Ala His Trp Pro Ala Arg Ile Glu His	
20 25 30	
gtc act gaa ccc aac cgc tac cag gtg ttc ttc ttc ggg acc cat gag	145
Val Thr Glu Pro Asn Arg Tyr Gln Val Phe Phe Phe Gly Thr His Glu	
35 40 45	
acc gcc ctg ctg ggc ccc aag cac ctt ttt cct tat gag gag tcc aag	193
Thr Ala Leu Leu Gly Pro Lys His Leu Phe Pro Tyr Glu Glu Ser Lys	
50 55 60	
gag agg ttc ggc aag cct aac aag agg cgc ggc ttc agt gag ggg ctg	241
Glu Arg Phe Gly Lys Pro Asn Lys Arg Arg Gly Phe Ser Glu Gly Leu	
65 70 75	
tgg gag atc gag cac gac cct atg gct gag gcc tcc cct tgc ctg tgc	289
Trp Glu Ile Glu His Asp Pro Met Ala Glu Ala Ser Pro Cys Leu Cys	
80 85 90 95	
cca gat gag gag cag ctt tgt gcc gag gag cca ggg cca gga gag gag	337
Pro Asp Glu Glu Gln Leu Cys Ala Glu Glu Pro Gly Pro Gly Glu Glu	
100 105 110	
cca gag ccg ggg cag gag ctg gag ccg gaa tcc agg cct gag ctg gaa	385

Pro	Glu	Pro	Gly	Gln	Glu	Leu	Glu	Pro	Glu	Ser	Arg	Pro	Glu	Leu	Glu		
			115					120					125				
tcc	atg	cct	gag	ctg	gag	gca	gaa	ccg	agg	cct	gag	aaa	gag	tgt	gag	433	
Ser	Met	Pro	Glu	Leu	Glu	Ala	Glu	Pro	Arg	Pro	Glu	Lys	Glu	Cys	Glu		
		130					135					140					
cag	gag	ccg	gag	cag	gag	ccg	gag	cag	gag	ctg	gag	cag	gag	ccg	gag	481	
Gln	Glu	Pro	Glu	Gln	Glu	Pro	Glu	Gln	Glu	Leu	Glu	Gln	Glu	Pro	Glu		
		145					150					155					
ctg	gag	ccg	gag	ccg	gag	ccg	gag	ccg	gag	ccg	gag	ccg	gag	ccc	gag	529	
Leu	Glu	Pro	Glu	Pro	Glu	Pro	Glu	Pro	Glu	Pro	Glu	Pro	Glu	Pro	Glu		
160					165				170					175			
ccc	gag	ccg	gag	ccg	gag	ccc	cag	cct	gcc	tat	gac	cta	ctg	gat	gcc	577	
Pro	Glu	Pro	Glu	Pro	Glu	Pro	Gln	Pro	Ala	Tyr	Asp	Leu	Leu	Asp	Ala		
			180						185				190				
aag	gag	gag	cct	ggc	ctc	att	gag	gcc	gag	cca	gga	gat	cag	caa	gcc	625	
Lys	Glu	Glu	Pro	Gly	Leu	Ile	Glu	Ala	Glu	Pro	Gly	Asp	Gln	Gln	Ala		
			195					200				205					
gag	caa	gtg	cga	gag	cag	cac	gct	gaa	gct	gag	gtc	atg	gct	gta	gtg	673	
Glu	Gln	Val	Arg	Glu	Gln	His	Ala	Glu	Ala	Glu	Val	Met	Ala	Val	Val		
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gag	gag	ccg	gag	agt	ctg	aag	agg	agc	gcg	gag	gat	gaa	cag	cct	cac	721	
Glu	Glu	Pro	Glu	Ser	Leu	Lys	Arg	Ser	Ala	Glu	Asp	Glu	Gln	Pro	His		
		225				230					235						
agt	cct	ccc	aaa	cgg	ccc	agg	gag	gcg	gcg	cct	ggc	gcg	ctg	gag	atg	769	
Ser	Pro	Pro	Lys	Arg	Pro	Arg	Glu	Ala	Ala	Pro	Gly	Ala	Leu	Glu	Met		
240					245				250			255					
gag	ccg	gct	gga	gag	cgc	gag	gca	gag	gcc	tgc	ccc	ttc	gtg	gag	gag	817	
Glu	Pro	Ala	Gly	Glu	Arg	Glu	Ala	Glu	Ala	Cys	Pro	Phe	Val	Glu	Glu		
			260				265					270					
cct	gac	caa	gcc	cag	gaa	cag	cag	act	ccg	ttg	gaa	gaa	gag	gcc	aca	865	
Pro	Asp	Gln	Ala	Gln	Glu	Gln	Gln	Thr	Pro	Leu	Glu	Glu	Glu	Ala	Thr		
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gag	gag	gca	gtc	cag	ggc	ctg	atg	gtt	gga	gaa	atc	gaa	ggc	ctg		910	
Glu	Glu	Ala	Val	Gln	Gly	Leu	Met	Val	Gly	Glu	Ile	Glu	Gly	Leu			
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ttgggaaacc	cgctagggcc															990	

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 <212> PRT
 <213> Homo sapiens

<400> 2

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		20					25					30					
Thr	Glu	Pro	Asn	Arg	Tyr	Gln	Val	Phe	Phe	Phe	Gly	Thr	His	Glu	Thr		
		35				40					45						
Ala	Leu	Leu	Gly	Pro	Lys	His	Leu	Phe	Pro	Tyr	Glu	Glu	Ser	Lys	Glu		
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Arg	Phe	Gly	Lys	Pro	Asn	Lys	Arg	Arg	Gly	Phe	Ser	Glu	Gly	Leu	Trp		
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	180							185					190		
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	195					200						205			
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	210					215					220				
Glu	Pro	Glu	Ser	Leu	Lys	Arg	Ser	Ala	Glu	Asp	Glu	Gln	Pro	His	Ser
225					230					235				240	
Pro	Pro	Lys	Arg	Pro	Arg	Glu	Ala	Ala	Pro	Gly	Ala	Leu	Glu	Met	Glu
			245						250				255		
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 <223> primer

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<210> 9
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 <212> PRT
 <213> Rattus norvegicus

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			20					25					30		
Thr	Glu	Pro	Asn	Arg	Tyr	Gln	Val	Phe	Phe	Phe	Gly	Thr	His	Glu	Thr
			35				40					45			
Ala	Leu	Leu	Gly	Pro	Lys	His	Leu	Phe	Pro	Tyr	Glu	Glu	Ser	Lys	Glu
	50					55					60				
Arg	Phe	Gly	Lys	Pro	Asn	Lys	Arg	Arg	Gly	Phe	Ser	Glu	Gly	Leu	Trp
65					70				75					80	
Glu	Ile	Glu	His	Asp	Pro	Met	Val	Glu	Ala	Ser	Pro	Cys	Leu	Cys	Pro
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Glu															

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			20					25					30		
Ala	Glu	Ala	Asn	Arg	Tyr	Gln	Val	Phe	Phe	Phe	Gly	Thr	His	Glu	Thr
			35				40					45			
Ala	Leu	Leu	Gly	Pro	Arg	His	Leu	Phe	Pro	Tyr	Glu	Glu	Ser	Lys	Glu
	50					55					60				
Lys	Phe	Gly	Lys	Pro	Asn	Lys	Arg	Arg	Gly	Phe	Ser	Glu	Gly	Leu	Trp
65					70				75					80	
Glu	Ile	Glu	His	Asp	Pro	Met	Val	Glu	Ala	Ser	Ser	Ser	Leu	Cys	Ser
			85					90					95		
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Glu															

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			20					25					30		
Met	Pro	Glu	Ala	Ala	Val	Lys	Ser	Thr	Ala	Asn	Lys	Tyr	Gln	Val	Phe
		35					40					45			
Phe	Phe	Gly	Thr	His	Glu	Thr	Ala	Phe	Leu	Gly	Pro	Lys	Asp	Leu	Phe
	50					55					60				
Pro	Tyr	Glu	Glu	Ser	Lys	Glu	Lys	Phe	Gly	Lys	Pro	Asn	Lys	Arg	Lys
65					70					75					80
Gly	Phe	Ser	Glu	Gly	Leu	Trp	Glu	Ile	Glu	Asn	Asn	Pro	Thr	Val	Lys
				85					90					95	
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 <213> Rattus norvegicus

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			20					25					30		
Met	Pro	Glu	Ala	Ala	Val	Lys	Ser	Thr	Ala	Asn	Lys	Tyr	Gln	Val	Phe
		35					40					45			
Phe	Phe	Gly	Thr	His	Glu	Thr	Ala	Phe	Leu	Gly	Pro	Lys	Asp	Leu	Phe
	50					55					60				
Pro	Tyr	Glu	Glu	Ser	Lys	Glu	Lys	Phe	Gly	Lys	Pro	Asn	Lys	Arg	Lys
65					70					75					80
Gly	Phe	Ser	Glu	Gly	Leu	Trp	Glu	Ile	Glu	Asn	Asn	Pro	Thr	Val	Lys
				85					90					95	
Ala	Ser	Gly	Tyr	Gln	Ser	Ser	Gln	Lys	Lys	Ser	Cys	Ala	Glu	Glu	Pro
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<210> 13
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 <212> PRT
 <213> Homo sapiens

Met	Ser	Arg	Ser	Asn	Arg	Gln	Lys	Glu	Tyr	Lys	Cys	Gly	Asp	Leu	Val
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Phe	Ala	Lys	Met	Lys	Gly	Tyr	Pro	His	Trp	Pro	Ala	Arg	Ile	Asp	Glu
			20					25					30		
Met	Pro	Glu	Ala	Ala	Val	Lys	Ser	Thr	Ala	Asn	Lys	Tyr	Gln	Val	Phe
		35					40					45			
Phe	Phe	Gly	Thr	His	Glu	Thr	Ala	Phe	Leu	Gly	Pro	Lys	Asp	Leu	Phe
	50					55					60				
Pro	Tyr	Glu	Glu	Ser	Lys	Glu	Lys	Phe	Gly	Lys	Pro	Asn	Lys	Arg	Lys
65					70					75					80
Gly	Phe	Ser	Glu	Gly	Leu	Trp	Glu	Ile	Glu	Asn	Asn	Pro	Thr	Val	Lys
				85					90					95	
Ala	Ser	Gly	Tyr	Gln	Ser	Ser	Gln	Lys	Lys	Ser	Cys	Val	Glu	Glu	Pro
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<212> PRT
<213> Homo sapiens

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35 40 45
Phe Phe Gly Thr His Glu Thr Ala Phe Leu Gly Pro Lys Asp Leu Phe
50 55 60
Pro Tyr Glu Glu Ser Lys Glu Lys Phe Gly Lys Pro Asn Lys Arg Lys
65 70 75 80
Gly Phe Ser Glu Gly Leu Trp Glu Ile Glu Asn Asn Pro Thr Val Lys
85 90 95
Ala Ser Gly Tyr Gln Ser Ser Gln Lys Lys Ser Cys Val Glu Glu Pro
100 105 110

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<211> 119
<212> PRT
<213> Homo sapiens

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35 40 45
Phe Gly Thr His Glu Thr Ala Phe Leu Gly Pro Lys Asp Leu Phe Pro
50 55 60
Tyr Lys Glu Tyr Lys Asp Lys Phe Gly Lys Ser Asn Lys Arg Lys Gly
65 70 75 80
Phe Asn Glu Gly Leu Trp Glu Ile Glu Asn Asn Pro Gly Val Lys Phe
85 90 95
Thr Gly Tyr Gln Ala Ile Gln Gln Gln Ser Ser Ser Glu Thr Glu Gly
100 105 110
Glu Gly Gly Asn Thr Ala Asp
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<211> 119
<212> PRT
<213> Mus musculus

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Ala Lys Met Lys Gly Tyr Pro His Trp Pro Ala Arg Ile Asp Glu Leu
20 25 30
Pro Glu Gly Ala Val Lys Pro Pro Ala Asn Lys Tyr Pro Ile Phe Phe
35 40 45
Phe Gly Thr His Glu Thr Ala Phe Leu Gly Pro Lys Asp Leu Phe Pro

